

CLAIMS

What is claimed is:

1. A multi-layer, wound golf ball comprising:

a solid center;

at least one intermediate layer disposed over the center;

a wound layer of a tensioned material disposed over the at least one intermediate layer;

and

a cover disposed over the wound layer,

wherein at least one of the cover or the at least one intermediate layer is formed from a

component which comprises a thermoset material;

wherein the tensioned material comprises a material selected from the group consisting of fiber, glass, carbon, polyether urea, polyether block copolymers, polyester urea, polyester block copolymers, isotactic-poly(propylene), polyethylene, polyamide, poly(oxymethylene), polyketone, poly(ethylene terephthalate), polyp-phenylene terephthalamide), poly(acrylonitrile), diaminodicyclohexylmethane, dodecanedicarboxylic acid, natural rubber, polyisoprene rubber, styrene-butadiene copolymers, styrene-propylene diene copolymers, another synthetic rubber, or block, graft, random, alternating, brush, multi-arm star, branched, or dendritic copolymers, and combinations thereof.

2. The golf ball of claim 1, wherein the tensioned material comprises a material selected

from the group consisting of polyether urea, natural rubber, cis-polyisoprene rubber, and combinations thereof.

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3. The golf ball of claim 1, wherein the component comprises at least two different thermoset materials.

4. A multi-layer, wound golf ball comprising:

a center;

at least one intermediate layer disposed over the center;

a wound layer of a tensioned material disposed over the at least one intermediate layer;

and

a cover disposed over the wound layer,

wherein the tensioned material comprises a material selected from the group consisting of fiber, glass, carbon, polyether urea, polyether block copolymers, polyester urea, polyester block copolymers, isotactic-poly(propylene), polyethylene, polyamide, poly(oxymethylene), polyketone, poly(ethylene terephthalate), poly(p-phenylene terephthalamide), poly(acrylonitrile), diaminodicyclohexylmethane, dodecanedicarboxylic acid, and combinations thereof.

5. The golf ball of claim 4, wherein the center comprises a material selected from the group consisting of polybutadiene, natural rubber, polyisoprene, styrene-butadiene copolymers, styrene propylene-diene copolymers, and combinations thereof.

6. The golf ball of claim 5, wherein the center has a diameter from about 0.9 inches (23 mm) to 1.5 inches (38 mm).

7. The golf ball of claim 4, wherein at least one of the outermost intermediate layer or the cover has a Shore D hardness from about 30 to 85.

8. The golf ball of claim 4, wherein the tensioned material comprises polyether urea.

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9. The golf ball of claim 4, wherein the wound layer has a thickness from about 0.9 mm to 8 mm.
10. The golf ball of claim 4, wherein the wound layer has a thickness less than 1 mm.
11. The golf ball of claim 4, wherein at least one of the cover or the at least one intermediate
5 layer is formed from a component which comprises a thermoset material.
12. The golf ball of claim 11, wherein the at least one intermediate layer comprises a thermoset material and the cover comprises a thermoplastic material.
13. The golf ball of claim 11, wherein the at least one intermediate layer comprises a thermoplastic material and the cover comprises a thermoset material.
14. The golf ball of claim 11, wherein the at least one intermediate layer and the cover each
comprise a thermoset material.
15. The golf ball of claim 14, wherein the at least one intermediate layer and the cover each
comprise the same thermoset material.
16. The golf ball of claim 4, wherein the cover is a single layer.
- 15 17. A multi-layer, wound golf ball comprising:
a center;
at least one intermediate layer disposed over the center;
a wound layer of a tensioned material disposed over the at least one intermediate layer
and having a thickness of less than 1 mm; and
20 a cover disposed over the wound layer.

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18. The golf ball of claim 17, wherein the center comprises a material selected from the group consisting of polybutadiene, natural rubber, polyisoprene, styrene-butadiene copolymers, styrene propylene-diene copolymers, and combinations thereof.

19. The golf ball of claim 17, wherein the center has a diameter from about 3.05 cm to 3.8 cm.

20. The golf ball of claim 17, wherein the tensioned material comprises a material selected from the group consisting of fiber, glass, carbon, polyether urea, polyether block copolymers, polyester urea, polyester block copolymers, isotactic-poly(propylene), polyethylene, polyamide, poly(oxymethylene), polyketone, poly(ethylene terephthalate), poly(p-phenylene terephthalamide), poly(acrylonitrile), diaminodicyclohexylmethane, dodecanedicarboxylic acid, natural rubber, polyisoprene rubber, styrene-butadiene copolymers, styrene-propylene diene copolymers, another synthetic rubber, or block, graft, random, alternating, brush, multi-arm star, branched, or dendritic copolymers, and combinations thereof.

21. The golf ball of claim 20, wherein the tensioned material comprises polyether urea, natural rubber, cis-polyisoprene rubber, or combinations thereof.

22. The golf ball of claim 17, wherein at least one of the cover or the at least one intermediate layer is formed from a component which comprises a thermoset material.

23. The golf ball of claim 22, wherein the at least one intermediate layer comprises a thermoset material and the cover comprises a thermoplastic material.

24. The golf ball of claim 22, wherein the at least one intermediate layer comprises a thermoplastic material and the cover comprises a thermoset material.

25. The golf ball of claim 22, wherein the at least one intermediate layer and the cover comprise a thermoset material.

26. The golf ball of claim 25, wherein the at least one intermediate layer and the cover comprise the same thermoset material.

27. The golf ball of claim 17, wherein the cover is a single layer.

28. The golf ball of claim 17, wherein at least one of the intermediate layer or the cover has a Shore D hardness from about 30 to 85.

29. A multi-layer, wound golf ball comprising:

a fluid-filled center;

at least one intermediate layer disposed over the center;

a wound layer of a tensioned material disposed over the at least one intermediate layer;

and

a cover disposed over the wound layer;

wherein at least one of the cover or the at least one intermediate layer is formed from a

component which comprises a thermoset material; and

wherein the tensioned material comprises a material selected from the group consisting of fiber, glass, carbon, polyether urea, polyether block copolymers, polyester urea, polyester block copolymers, isotactic-poly(propylene), polyethylene, polyamide, poly(oxymethylene), polyketone, poly(ethylene terephthalate), polyp-phenylene terephthalamide), poly(acrylonitrile), diaminodicyclohexylmethane, dodecanedicarboxylic acid, natural rubber, polyisoprene rubber, styrene-butadiene copolymers, styrene-propylene diene copolymers, another synthetic rubber, or

block, graft, random, alternating, brush, multi-arm star, branched, or dendritic copolymers, and combinations thereof.

30. The golf ball of claim 29, wherein the tensioned material comprises polyether urea.

31. A multi-layer, wound golf ball comprising:

a center;

at least one intermediate layer disposed over the center;

a wound layer of a tensioned material disposed over the at least one intermediate layer;

and

a cover disposed over the wound layer;

wherein at least one of the cover or the at least one intermediate layer is formed from a component which comprises a material selected from the group consisting of a thermoset material, and wherein the tensioned material comprises fiber, glass, carbon, polyether urea, polyether block copolymers, polyester urea, polyester block copolymers, isotactic-poly(propylene), polyethylene, polyamide, poly(oxymethylene), polyketone, poly(ethylene terephthalate), poly(p-phenylene terephthalamide), poly(acrylonitrile), diaminodicyclohexylmethane, dodecanedicarboxylic acid, or block, graft, random, alternating, brush, multi-arm star, branched, or dendritic copolymers, and combinations thereof.

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